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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES F. FLACK and SINA FATEH

Appeal 2009-0673
Application 09/328,053
Technology Center 2600

Decided: January 15, 2009

Before JOSEPH F. RUGGIERO, JOHN A. JEFFERY,
and KARL D. EASTHOM, *Administrative Patent Judges*.

EASTHOM, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the Examiner's Final Rejection of claims 1-99. No other claims are pending (App. Br. 3).¹ We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

Appellants disclose systems and methods for scrolling through material on a hand-held computer display, using a motion detector, instead of using a prior art pen-like pointing device. By simply moving the hand-held computer in the direction a user is interested in viewing, the user can traverse a two-dimensional object, such as a geographical map, electronic schematic, or text document that is much larger than the display. (Spec. 2: 22-32; 5: 3-8; 27-31; Fig. 9).

Claim 1, illustrative of the invention, follows:

1. A computer implemented method for assisting a user in the control and operation of a computer system, the computer system having a display device, the computer system providing information content for display, such information content potentially containing more content such as characters, pictures, lines, or pixels than can be conveniently displayed entirely on the display device at one time, comprising:

- coupling a display device to a computer system;
- mapping the information content generated by the computer system into a virtual desktop suitable for conveying the information content to the user;
- displaying a certain portion of the virtual desktop using the computer system's display device;
- tracking translational movements of the display device; and

¹ The Examiner's Answer (mailed May 23, 2008) ("Ans.") and Appellants' Brief (filed February 20, 2008) ("App. Br.") and Reply Brief (filed July 15, 2008) ("Reply Br") detail the parties' positions.

adjusting the displayed certain portion of the virtual desktop in a manner related to the tracked movements of the display device by which the user is able to traverse the entire information content mapped to the virtual desktop and examine any certain portion or segment of the information content using the computer system's display device.

The Examiner relies on the following prior art reference to show unpatentability:

Motosyuku	US 5,602,566	Feb. 11, 1997
Ball	US 5,686,942	Nov. 11, 1997
Kang	US 6,009,210	Dec. 28, 1999 (filed Mar. 5, 1997)
Detlef	US 6,178,403 B1	Jan. 23, 2001 (filed Dec. 16, 1998)

The Examiner rejected claims 1-3, 6-16, 19-32, 34-45, 47-50, 52-55, 58-68, 71-83, 86-96, and 99 under 35 U.S.C. § 103(a) based on Motosyuku and Ball.

The Examiner rejected claims 4, 5, 33, 56, 57, 84, and 85 under 35 U.S.C. § 103(a) based on Motosyuku, Ball, and Kang.

The Examiner rejected claims 17, 18, 46, 51, 69, 70, and 97-98 under 35 U.S.C. § 103(a) based on Motosyuku, Ball, and Detlef.

ISSUE

Appellants generally make the same patentability arguments for the independent claims 1, 32, 55, 83 and 99. (App. Br. 12-20). Appellants assert that Motosyuku and Ball do not teach tracking translational

movements and the ability to traverse the entire information content mapped to a virtual desktop, as generally set forth in the independent claims.

Appellants also assert that Motosyuku and Ball do not teach a physical map as set forth in claims 32 and 55. *Id.* Appellants do not present separate patentability arguments for any of the dependent claims. (App. Br. 22-24). Therefore, with respect to the rejections based on Motosyuku and Ball, we select claims 1 and 32 as representative of the claims on appeal. *See* 37 C.F.R. § 41.37(c) (1)(vii).

The issues before use are:

Did Appellants demonstrate that the Examiner erred in finding that Motosyuku and Ball collectively teach tracking translational movements and traversing the entire information content mapped to a virtual desktop to meet the disputed limitations set forth in claim 1?

Did Appellants demonstrate that the Examiner erred in finding that Motosyuku and Ball, in light of known prior art, meet the map limitation set forth in claim 32?

FINDINGS OF FACT (FF)

1. Appellants admit that typical prior art applications include a map viewer to horizontally and vertically scroll two-dimensional objects, including maps that are bigger than the viewing screen. Pointing to and moving a hand icon with a pointer allows viewing. (Spec. 1:28-31; 3: 16-27).

2. Appellants filed an Amendment, mailed April 8, 2002, reciting “translational” in the independent claims and the Specification.² The Amendment to the Specification delineates “translational” movement as including, *inter alia*, movements along angles of cylindrical or spherical coordinate systems. In particular, Appellants’ Amendment states:

The motion along the x and y axes in a preferred embodiment, which also may include a z-axis component, of the present invention is generally referred to as “translational” or “planar” motion and corresponds to the “actual space” in which the device is moved. Translational movement may also include movement measured in other types of coordinate systems in which the distance moved by the device can be translated into changes in the portion of the displayed part of the virtual desktop. These include, but are not limited to cylindrical (where r and z is the distance moved and theta is the angle changed either horizontally or vertically) or spherical (where r is the distance moved away from the user, and theta and phi measure either the angle changes horizontally or vertically). (Admt. 1-2)

3. Appellants also state that one embodiment does not track rotational movement but “that other embodiments of the invention may include a rotational sensor allowing the invention to track rotation of the computer 20.” (Spec. 12:1-8).

4. Appellants disclose tracking with an “inside-out” or an “outside-in” approach. With the latter approach, sensors external to the display

² See Final Office Action, mailed January 25, 2006. No objection to the Amendment was made by the Examiner. The USPTO clerical staff entered it.

device transmit radio, infrared or other information to the computer to track relative or absolute movement of the display device. (Spec. 9:18 to 10:4).

5. Motosyuku discloses tracking the tilting movement of a hand-held computer to scroll through two-dimensional objects such as text. The system tracks relative tilt direction and angle – to determine scrolling (i.e., up or down) direction and speed. The tilt direction and angle thus accordingly change scrolling movement on the display screen (Figs. 2-5, col. 1, ll. 59-64; col. 2, ll. 3-19).

6. Motosyuku's system reads one frame of information from a storage unit connected to the display screen, displays that information, and then increments a software pointer to scroll through more stored information according to the tilt angle (col. 3, l. 11 to col. 4, l. 64). Any desired number of lines can be scrolled based on the tilt angle and incremental or decremental value of the pointer (col. 5, ll. 32-38).

7. Ball discloses a computer system that tracks relative motion of an object external to the computer, such as a user's nose, in x, y, and z directions relative to light or infrared sensors on a computer screen. The tracked nose motion moves an object such as an icon on the screen. (Abstract; Figs. 1, 2; col. 4, ll. 55-61; col. 5, l. 66 to col. 6, l. 17).

8. Since Ball's system tracks relative motion based on infra red image data or other reflected rays between the user's nose and the computer sensors (*see* generally col. 3, l. 42 to col. 6, l. 17; FF 5), the system also inherently has the ability to track movements of a moving computer relative to a fixed user.

PRINCIPLES OF LAW

“[T]here must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). “On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of *prima facie* obviousness” *Kahn*, 441 F.3d at 985-86 (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

KSR Int’l Co. v. Teleflex, Inc., 127 S.Ct. 1727, 1740 (U.S. 2007).

Non-functional descriptive material cannot render patentable an otherwise unpatentable product or process. *In re Ngai*, 367 F.3d 1336, 1339 (Fed. Cir. 2004). *See also Ex parte Curry*, 84 USPQ2d 1272, 1275 (BPAI 2005) (Informative Opinion) (Affirmed, Rule 36, Fed. Cir., slip op. 06-1003, June 2006) (“Common situations involving non-functional descriptive material [include] . . . a computer that differs from the prior art solely with respect to nonfunctional descriptive material that cannot alter how the machine functions (i.e., the descriptive material does not reconfigure the computer)”).

During examination of a patent application, a claim is given its broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969). “It is the applicant’s burden to precisely define the invention, not the PTO’s.” *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997). “The problem in this case is that appellants failed to make their intended meaning explicitly clear.” *Id.*

ANALYSIS

Ball’s system tracks relative translational movements in the x, y, and z direction, meeting the disputed limitation of claim 1 (FF 7, 8). Appellants’ assertion that Ball’s system only tracks user movement does not account for Ball’s teaching that the system tracks relative movement. One of skill in the art would have recognized that relative movement implies tracking the computer or external sensor; i.e., with either the computer or sensor fixed, and the other one moved (FF 7, 8).³ Appellants also admit that scrolling maps horizontally and vertically with a pen-like pointer, (i.e., translational movement, as implied by Appellants’ arguments (*see* Reply Br. 5)) was well known. (FF 1).

The Examiner’s reasoning only requires Ball’s teaching of the translational movement itself, apart from which relative device, the nose pointer or the computer, actually moves. (Ans. 8). As the Examiner also reasoned, attacking Ball’s user/nose movement as lacking translational movement amounts to a separate attack of the references. (*Id.* – citing *In re*

³ Ball’s system is similar to Appellants’ “outside-in” approach. (*Compare* FF 4 with FF 7, 8). Appellants, like Ball, also broadly disclose tracking relative movement. (*Id.*).

Keller, 642 F.2d 413, 426 (CCPA 1981)). Substituting Ball's or the admitted prior art translational tracking techniques for Motosyuku's rotational/tilt tracking technique amounts to the simple substitution of alternative prior art motion detection/tracking techniques, each performing predictable functions, as the Examiner generally reasoned. (*See* Ans. 8). Under *KSR*, *Kahn*, and *Keller*, Appellants have not demonstrated error in the Examiner's obviousness determination.

Further, as an alternative, Appellants' vague definition of "translational" movement (FF 2) does not preclude Motosyuku's rotational tilt movement, contrary to Appellants' assertions otherwise (Reply Br. 5). Appellants state that "translational" includes "actual space" moved. However, a tilt constitutes actual space and distance moved by the front or rear of Motosyuku's device along a tilt angle (FF 5, 6). Moreover, not only does Appellants' definition include measuring mere "angle changes" as opposed to distance (FF 2), Appellants also specifically include tracking rotational movement as a possibility for any of the embodiments, except one (FF 3).

Motosyuku tracks such tilt movement (FF 5, 6), contrary to Appellants' unsupported assertions implying that scrolling one or two lines according to such tilt movement does not constitute tracking movement (Reply Br. 5). Scrolling any number of lines according to tilt constitutes tracking (FF 6). Under *Morris, supra*, Appellants failed to meet the burden of clearly defining "tracking translational movements," as claim 1 recites, sufficiently to define over Motosyuku's tracked rotational movement.

Motosyuku's system also allows "a user . . . to traverse the entire information content mapped to a virtual desktop," because all the text in

storage can be scrolled, and it is mapped by a software pointer⁴ to the computer display (i.e. “virtual desktop”). (FF 5, 6). The Examiner reasoned that Motosyuku’s system allows scrolling of non-displayed information. (Ans. 7). Again, under *Miller* and *Kahn*, Appellants’ arguments (App. Br. 12) do not demonstrate clearly how the claimed invention distinguishes over Motosyuku.⁵

Finally, with respect to the alleged lack of a teaching of a map as required by claim 32, Appellants admit that such map systems were known. (FF 1). The Examiner took Official Notice that such navigational systems were known. (Ans. 5). Appellants did not challenge that finding. In any case, using such a known prior art map scrolling application in Motosyuku’s text scrolling system amounts to the substitution of prior art elements according to their established functions. Such a substitution would have been obvious under *KSR*.

Moreover, a map, relative to Motosyuku’s text document (FF 5), constitutes nonfunctional descriptive material. Such material, under *Ngai* and *Curry, supra*, cannot render an otherwise unpatentable system or process patentable.

⁴ Motosyuku’s “pointer” refers to a known software data link scheme, in distinction to hardware pointing devices, i.e., a mouse, or other pen-like pointing devices, etc.

⁵ The claim does not explicitly preclude use of a hardware pointer. That is, “tracking translational movements of the display device,” and “using the computer system’s display device,” as recited in claim 1, does not preclude using a hardware pointer and tracking relative movement of the display device (*see* FF 4). In any case, the combined references meet claim 1, whether or not it precludes such a hardware pointer and relative tracking.

CONCLUSION

Appellants fail, under *Kahn*, to demonstrate error in the Examiner's findings. Appellants did not demonstrate that the Examiner erred in finding that Motosyuku and Ball collectively teach tracking translational movements and allowing a user to traverse the entire information content mapped to a virtual desktop to meet the disputed limitations set forth in claim 1. Appellants also did not demonstrate that the Examiner erred in finding that Motosyuku and Ball, in light of known prior art, meet the map limitation set forth in claim 32. Appellants did not present separate patentability arguments for the dependent claims rejected as obvious under the teachings of Motosyuku and Ball; Motosyuku, Ball, and Kang; and Motosyuku, Ball, and Detlef. Therefore, we sustain the Examiner's rejections of all claims on appeal.

DECISION

We affirm the Examiner's decision rejecting claims 1-99.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(2006).

AFFIRMED

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